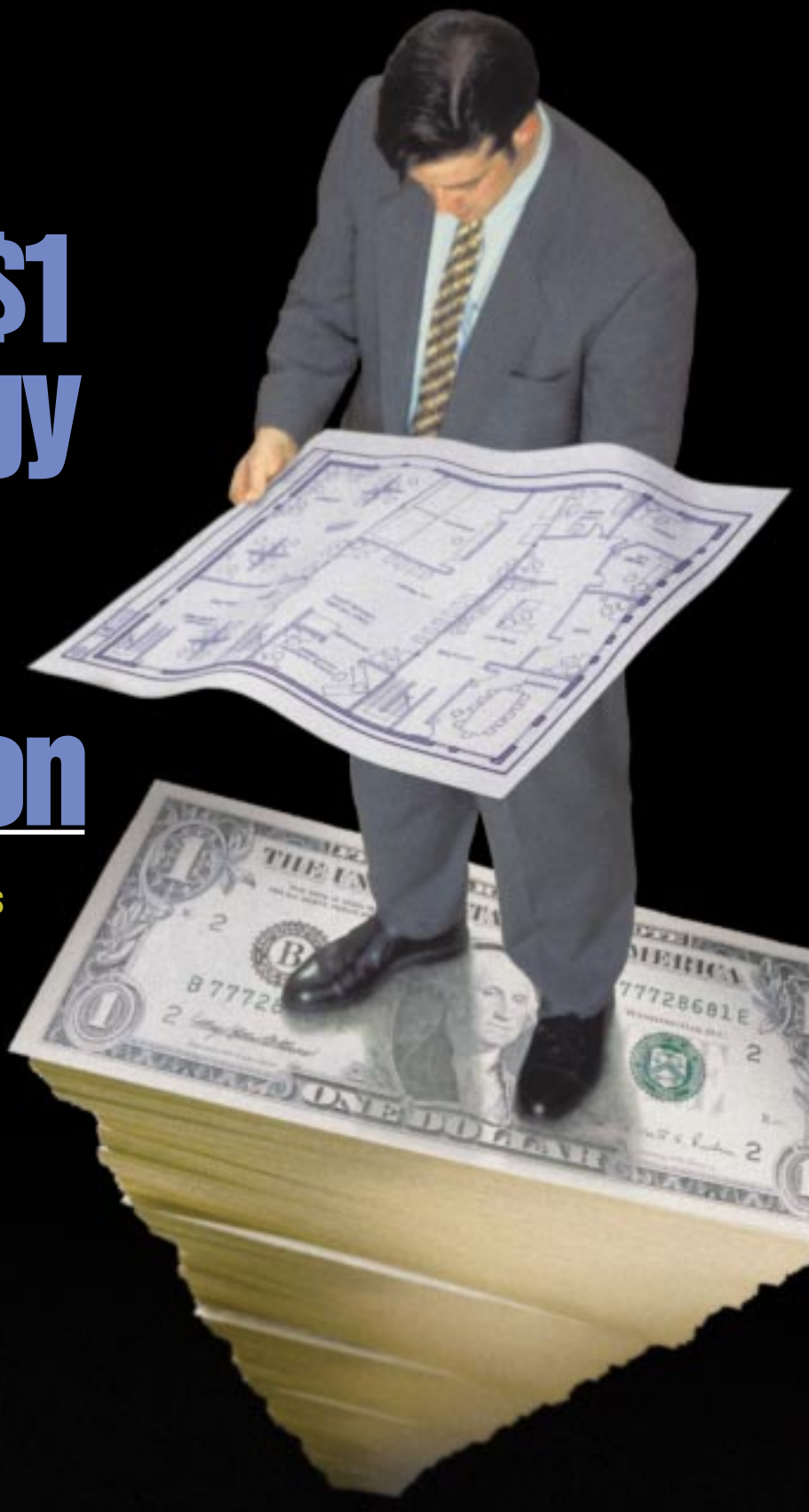
A Special Supplement to *Building Operating Management/Energy Decisions*

He just turned $1 in energy savings into $1 million

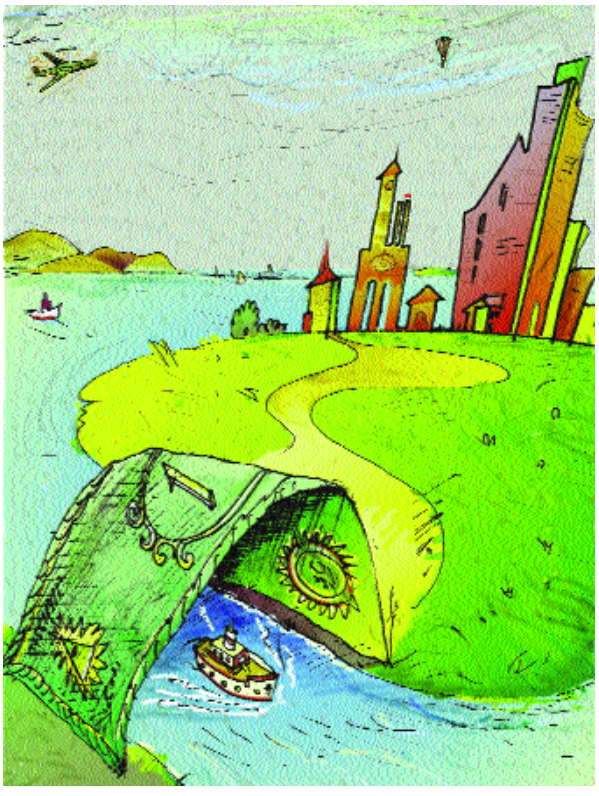


Thousands of other companies have done it too. Inside, a look at what it will take for you to follow in his footsteps.

Energy Cost Savings Council

It's One Dollar **You Can't Afford** *Not to Save*

At thousands of companies, facility executives have learned that it is possible to turn $1 of energy savings into $10,000, $100,000, $1 million, or more. It's not funny money. In fact, there's nothing funny about it at all. For every company that has moved to capture these savings, there are scores of others that haven't begun. The bottom line for them is a lost opportunity potentially worth millions of dollars.



It all starts with $1. That's how much many companies can save on energy costs by upgrading their facilities with more energy-efficient electrical products. One dollar per square foot, per year. For 10, 15, even 20 years.

Consider what that means for a 100,000-square-foot facility. One dollar per square foot in energy savings becomes a revenue stream worth $1 million to the company over 10 years — the minimum expected life for most energy-efficient products. And in most cases the savings don't stop there.

Exactly how long an upgrade pays dividends varies by product, but the estimated life of most energy-efficient technologies is in the 10 to 20 year range. For lamps, the estimated life is 5 to 7 years. But HVAC systems and drives will continue to return savings for 10 to 15 years. And for ballasts, motors, lighting controls, and other products, the estimated product life is

15 to 20 years. (See chart on page 6.) For most energy-efficient technologies, that means an investment today will continue paying the organization back for well over a decade.

There's no free lunch, of course. Capturing those savings requires an investment in a carefully planned upgrade. Many companies, at least initially, upgrade a single building system. But the biggest savings come from upgrades designed to improve

Many buildings can cut annual energy costs $1 per square foot or more

the energy performance of the whole building. The idea of the comprehensive whole-building upgrade is to use the combination of technologies — including lighting, HVAC, motors and drives, controls, and automation systems — that will produce the biggest savings for a specific building.

Regardless of whether the upgrades targets the whole building or a single technology, companies don't have long to wait before these upgrades pay for themselves and begin their annual contributions to the bottom line. Energy-efficient electrical product upgrades often achieve paybacks in less than three years and returns on investment in the 30 to 50 percent range.

Not surprisingly, numbers like those command top management's respect. Universal Studios Florida has completed significant energy upgrades involving lighting and motors and drives. "We've been finding two to three year paybacks," explains Dennis Rosolowski, director, technical services, for the company, which recently joined EPA's ENERGY STAR Buildings program. "When we go for capital funding, I probably get about 90 percent of my projects approved because of their paybacks."

With the financing options available today, companies can often get guaranteed energy savings with no upfront investment required. (See page 12 for more on financing options.)

SQUARE ONE

The starting point is to understand the tremendous efficiency improvements that a whole range of en-

Inside

ergy-using electrical products have undergone over time. From ballasts and lamps to chillers, motors and drives, the energy performance of today's products is dramatically more efficient than that of their counterparts from 10 or 20 years ago. These improvements mean that even single product upgrades can bring substantial savings. But the whole-building approach — which involves a comprehensive upgrade of the entire facility's electrical and other energy-related systems — makes the smartest use of those improved components. A simple example shows why. Suppose a building plans to upgrade its lighting system to use electronic ballasts and T8 lamps and to replace 30-year-old CFC chillers. Taking those two steps in isolation will undoubtedly save energy — a lot of energy. But a whole-building approach makes it possible to save a good deal more. In a whole-building strategy, the facility executive upgrades the lighting first to reduce the heat load on the chillers. It is then possible to install smaller, less costly chillers, which means faster payback and better return on investment.

What's more, the whole-building approach may well justify — in bottom-line terms — energy-saving measures that might not otherwise win approval. With this approach, the whole can be substantially greater than the sum of its parts. That is, a whole-building upgrade can deliver energy cost savings that are greater than the total gains that could be achieved by all of the components installed individually.

In a sense, it works like compound interest. Each technology that is upgraded provides energy savings on its own. But it also provides a base on which other energy savings can grow.

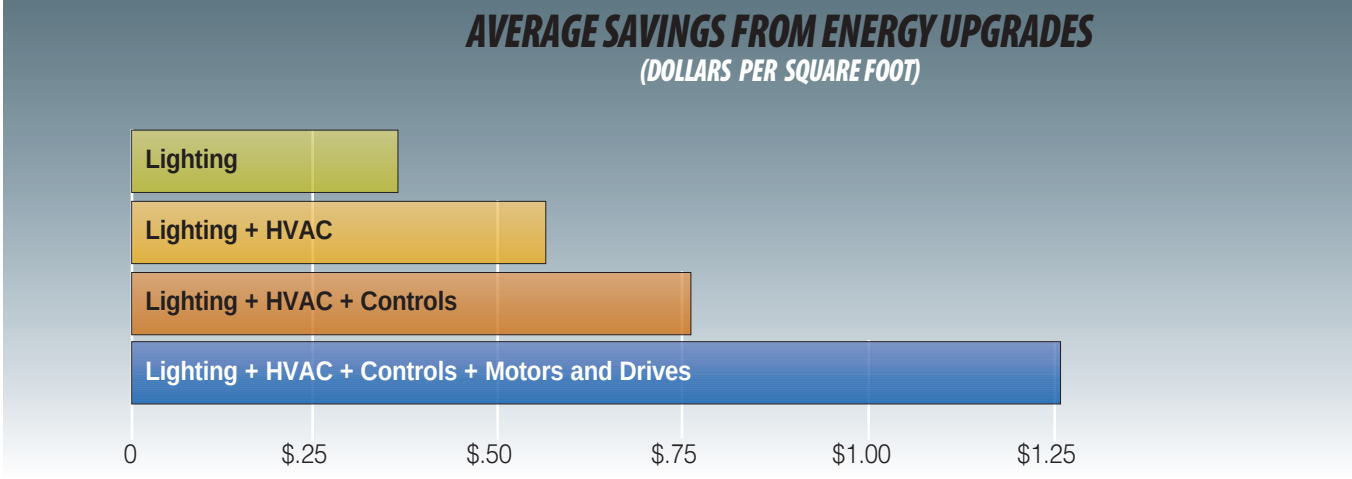
Electrical product efficiency has risen dramatically in the last 10 to 20 years

Depending on a detailed analysis of each building's specific needs, a whole-building energy upgrade may address some or all of the following measures:

- lamps, ballasts, controls and other lighting products
- HVAC upgrades to chilled water and air handling systems
- new motors and drives
- building automation system installation
- maintenance elements, such as weatherstripping, caulking, pressurizing the building, etc
- use of ENERGY STAR compliant computers
- new energy-use metering equipment
- window and door replacements

Combining technologies can boost savings . . .

An Energy Cost Savings Council study of 1,000 energy upgrades shows that the biggest cost savings come from projects that take advantage of a range of technologies.



Though the task may initially seem difficult, accomplishing an upgrade and achieving the resulting savings is far easier than most facility executives imagine. The magnitude of the potential savings may make it worthwhile to devote a significant amount of facility staff time to the upgrades and to have the organization fund the project out of the capital budget. But a facility can also reap the benefits of an energy upgrade by turning to a wide range of outside resources. By sharing the energy savings achieved, the facility can usually find a partner that will fund the upgrade, so the organization has no upfront capital costs and is guaranteed savings. (See page 14 for a list of energy service and financing companies.)

The Energy Cost Savings Council (ECSC) discovered the value of single and multi-technology upgrades when it analyzed 1,000 electrical product upgrade projects completed between 1988 and 1996. In a 1998 report, ECSC

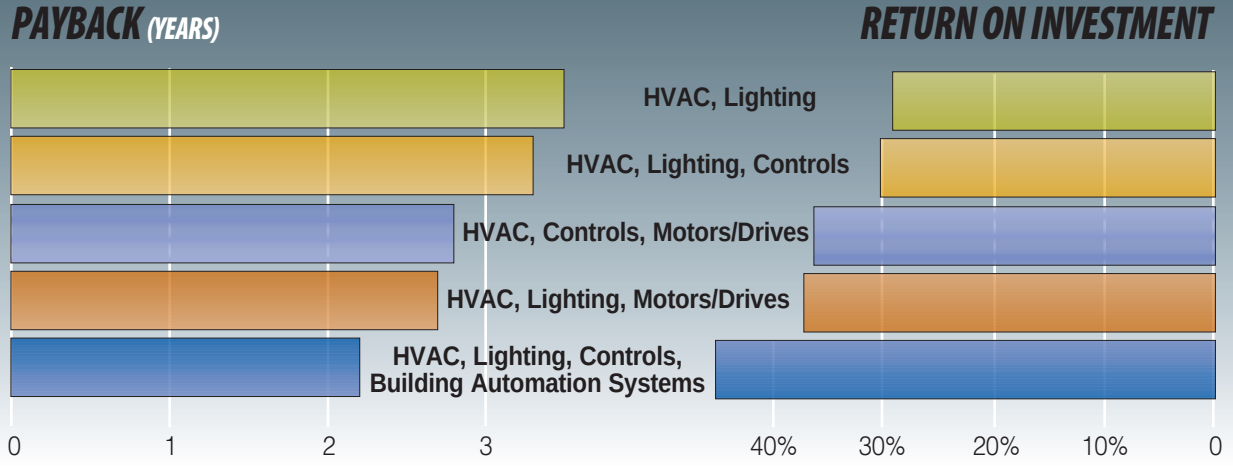
FOR YOUR EYES ONLY: WHAT'S IN IT FOR YOU

Let's face it, a whole-building electrical product upgrade is going to demand extra time and commitment on your part. Why work so hard at something that just benefits the corporation or institution? What's in this project for you? Some very good things, actually.

1. Respect from the boardroom. Show the CFO that energy costs can be the source of a substantial, long-term revenue stream — you'll find that, when you talk, people in the boardroom will listen.
2. An easier job. When the whole building has been tuned to run at optimum conditions, fewer things break down. Building occupants are happier because they are not too hot or too cold. You are not constantly sending someone to fix the chiller on the fifth floor, rebuild the motor on the air handler, etc., so you have the time to devote your staff resources to activities that support corporate goals or contribute to the bottom line.
3. Possibly a promotion. A number of facilities executives who have changed management's view of their function have been given new responsibilities, new titles and new salaries.
4. More money in your pocket. If you are a good salesperson, sell the boardroom on energy improvements with a personal bonus attached to the savings achieved.

. . . While delivering rapid payback and strong returns on investment

The same study demonstrates that multiple-technology upgrades can provide paybacks and returns that will make them attractive to most organizations



notes that energy savings of $.30 to $.50 per square foot are routine and that energy savings of $1.00 to $1.50 per square foot "are clearly attainable via upgrade to more energy-efficient electrical products, particularly when the upgrade project involves multiple technologies within the entire building envelope." (See page 8 to get a free copy of this report.)

Utility rebates were more common in the years the projects were completed, but half of the projects in the study were completed without rebates. ECSC found that payback periods and ROI for those projects were typically far in excess of average corporate hurdle rates for capital investments.

STILL NOT CONVINCED?

While an energy-efficient electrical product upgrade can produce significant energy cost reductions, those savings aren't the end of the story. Upgrades offer a range of other advantages — some easily quantified, others not so easily translated into numbers but significant nonetheless — that should be considered when projects are being evaluated. "Raw energy savings is only one benefit of an energy retrofit," explains John Vucci, assistant director of HVAC systems at the University of Maryland. "Look at the other savings and it becomes even more viable."

Here are several ways energy upgrades can improve the operating performance of facilities:

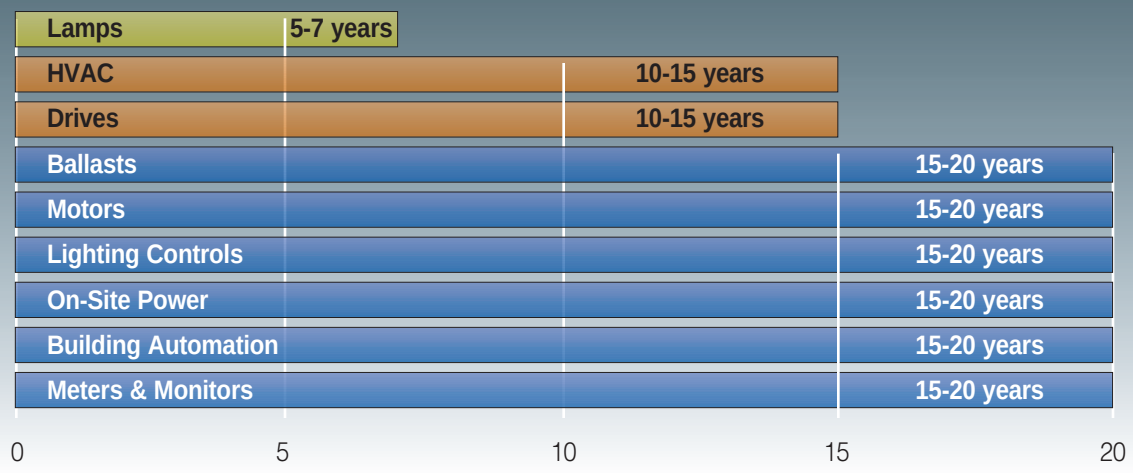
Reduce Maintenance Costs. Newer models of mechanical equipment generally require far less maintenance than their older counterparts, which provides a quick savings in manhours. "That's a major savings and can bring down payback periods," says Vucci. In the case of lighting, more efficient lamps can reduce the need for up to half of the pre-existing lamps, which significantly reduces the number of lamp replacements required and the associated labor costs.

Improve Comfort and Indoor Air Quality. An upgrade to a building's electrical infrastructure can go a long way toward making building occupants more comfortable and more productive. For example, better lighting can help reduce eye strain and improve ambiance. What's more, an upgrade can help address the top two occupant complaints: space that is too cold or too hot. And the new systems can also mean better indoor air quality.

Help Prepare for Deregulation. Organizations that don't take action to prepare for the deregulation of the electric power industry may see little if any reduction in rates, say many industry experts. Energy upgrades can play a key role in helping companies capture potential savings from deregulation. For example, measures that reduce peak levels of electricity consumption may help companies take advantage of new electric rate structures in a deregulated market.

Help Meet Environmental Goals. Companies that undertake electrical product upgrades play a significant role in the global efforts to protect the environment.

Long Product Lives Mean Long-Term Savings



Reductions in energy use significantly reduce emissions of pollutants like sulfur dioxide, nitrous oxide and carbon dioxide. Upgrade activities by the several thousand partners in the Green Lights/ENERGY STAR Buildings programs have already reduced our country's level of noxious emissions by the equivalent of the removal of more than 1 million cars from U.S. roads. And whole-building upgrades can make it cost effective to replace older, CFC chillers with new, more efficient, non-CFC chillers. Smart companies are also effectively publicizing environmental efforts to improve their image with customers and the general public.

Can your building save $.30, $.50, even $1 per square foot in energy costs? Unless the building has recently been upgraded, the answer is probably yes. According to the Department of Energy, less than 20 percent of the nation's roughly 5 million existing commercial, institutional and industrial buildings had undergone energy upgrades by the mid-1990s. For the other 80-plus percent, the opportunity to save $1 a square foot for a decade or more is too good not to explore.

THE REAL WORLD OF ENERGY UPGRADES

Thousands of companies across all market sectors have reduced costs by millions of dollars thanks to investments in energy-efficient electrical product upgrades. Here's a small sample.

HEALTH CARE: Kaiser Permanente undertook an extensive conservation program aimed at upgrading the company's more than 200 hospitals and health care facilities in Southern California. By upgrading with more efficient lamps and ballasts and installing optical reflectors where needed, these facilities are expected to reduce their energy bills by over $5 million a year. "The savings we have achieved help control health care costs," says Kaiser Permanente Energy Specialist Thomas A. Damberger. "[Reducing] energy consumption has a positive impact on the environment as well as on our bottom line."

COMMERCIAL OFFICE: A 40-story, 1 million square-foot skyscraper in Miami undertook a multi-technology upgrade, updating the building's windows and insulation and installing energy-efficient motors and adjustable frequency drives as well as more efficient lamps, ballasts, and reflectors. The result was a 22 percent reduction in energy consumed and a $25,000 monthly (or $300,000 annual) drop in energy costs. With those savings — coupled with incentives offered by the local utility, Florida Power & Light — the payback on the investment was less than one year.

RETAIL: An IKEA Company furniture retail outlet in Plymouth Meeting, Penn., recently pursued a lighting system upgrade in the store's warehouse, restaurant and showroom. Electricity costs and usage declined by 20 percent, but that wasn't the only source of savings. Because the upgraded system produced the same amount of light with fewer fixtures, maintenance costs were reduced. What's more, the more efficient, cooler-operating lamps brought additional savings in the form of reduced air conditioning costs.

EDUCATIONAL: The San Diego Unified School District, an EPA ENERGY STAR Buildings partner, recently undertook a multi-technology upgrade that has had a significant impact on its bottom line. Higher efficiency lamps and ballasts replaced older technology in classrooms and gyms; these retrofits alone saved the district more than $2.5 million in annual electricity costs. Next, HVAC and controls upgrades began. Evaluation of the HVAC and controls technologies in place led to the installation of variable speed drives and high-efficiency, custom-built air conditioning systems. Other upgrades included cooling towers, boilers and implementation of an energy management system. All totaled, these upgrades are projected to reduce the district's annual utility and maintenance costs by $5.5 million.

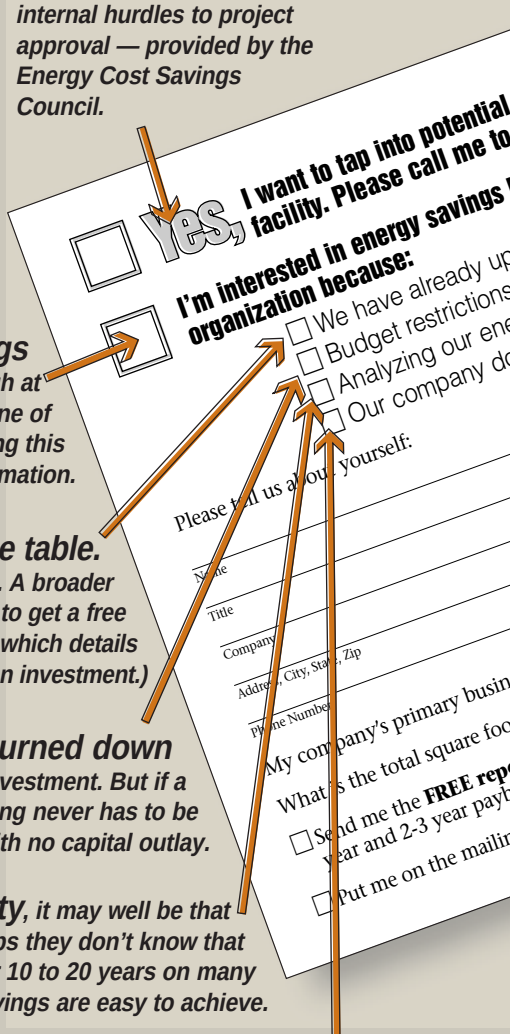
MANUFACTURING: Driven by heavy energy use and higher-than-national-average electricity rates, Norton Industries, Inc., a California-based manufacturer of industrial hose clamps, converted its older metal halide lighting to more efficient metal halide multi-vapor lamps. "When I showed how we could save energy, maintain light levels, and easily integrate new lamps into our system, the change was approved," explains David Batholomaei, head of Norton's Electrical Department. Upgrading to multi-vapor lamps cut the plant's energy use by 10 to 15 percent with no reduction in light levels or quality of light.

Want to Learn More?

This reply card is a quick way to add to your overall knowledge about energy-efficient upgrades or to find answers to specific questions about upgrades. Take a minute to fill it out — the information you receive could help your company get started on the path to substantial energy savings.

Even if you're **not** interested in undertaking an upgrade project at this time, please take a moment to complete the card. Your response will help the Energy Cost Savings Council better understand the energy-upgrade information needs of organizations like yours.

Information and resources to help you *analyze energy-saving opportunities, plan upgrades and successfully manage internal hurdles to project approval — provided by the Energy Cost Savings Council.*



Many companies miss savings *because they don't look closely enough at opportunities. If your company falls into one of the categories listed below, consider using this card to get more information.*

Many upgrades leave substantial savings on the table. *Why? Because they are limited to a single building system. A broader approach can capture significantly more savings. (Use this card to get a free copy of the 1998 report on 1,000 upgrade projects, which details representative savings, payback and returns on investment.)*

Many profitable upgrade proposals are turned down *on the grounds that the company can't afford the initial investment. But if a proposed project can produce significant savings, financing never has to be an obstacle. Many projects can even be handled with no capital outlay.*

If energy cost reduction isn't a priority, *it may well be that top executives aren't aware of the facts. Perhaps they don't know that savings can reach $1 per square foot per year for 10 to 20 years on many products. Or maybe they don't realize that the savings are easy to achieve.*

A company doesn't need a dedicated "energy manager" *to proceed with an upgrade. Energy service companies (ESCOs) and other organizations can provide the expertise needed to design and implement and help facilitate upgrades.*

ENERGIZING YOUR COMPANY'S BOTTOM LINE

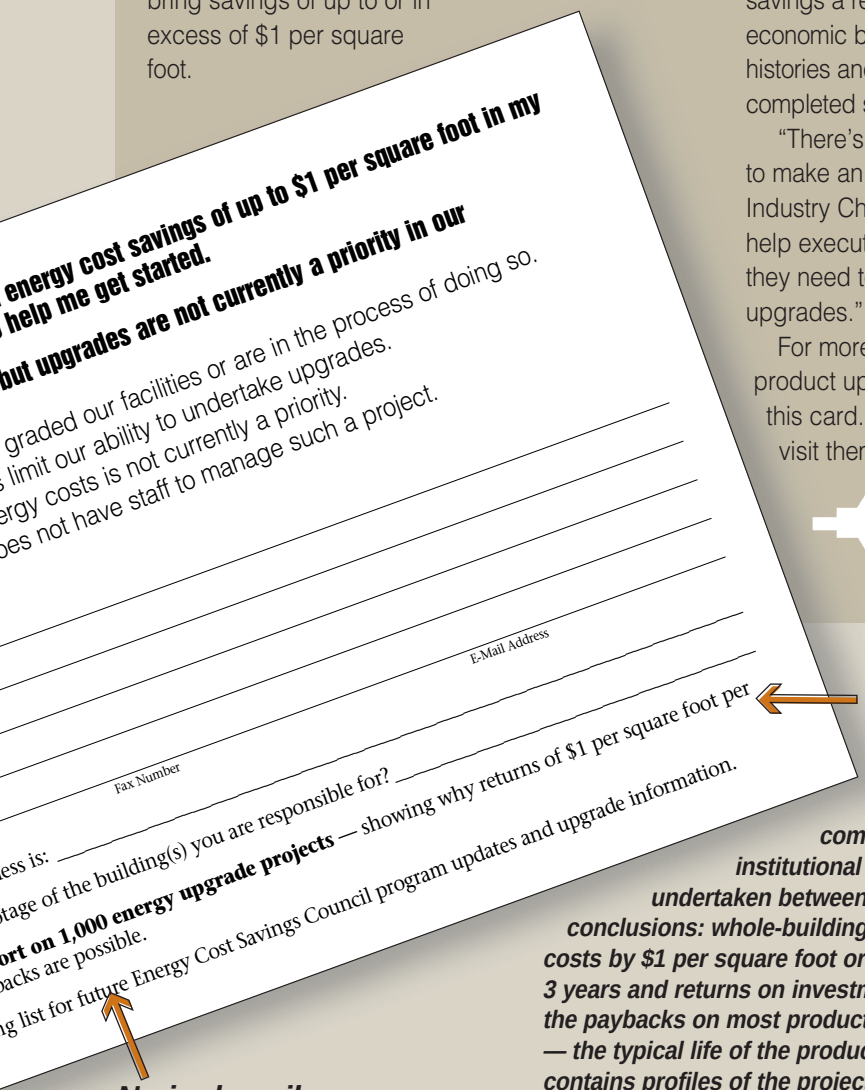
The Energy Cost Savings Council (ECSC) is a consortium of electro-technology manufacturers, industry associations, and other interested organizations working together to provide information about the bottom-line benefits of energy-efficient electrical product upgrades in commercial, industrial, and institutional buildings. ECSC's message to building owners and executive decision-makers is simple: Electrical product upgrades can bring savings of up to or in excess of $1 per square foot.

ECSC's goal is to spread the word about the proven technologies and techniques that can make those savings a reality. ECSC can offer information about the economic benefits of upgrades, and can provide case histories and testimonials from those who have completed successful, cost-effective projects.

"There's a wealth of information about what it takes to make an energy upgrade a success," says ECSC Industry Chairman Jack Briody. "ECSC's goal is to help executive decision-makers get the information they need to make informed decisions about upgrades."

For more information on energy-efficient electrical product upgrades or ECSC, simply complete this card. Or call ECSC at **(888) 829-2209** or visit them on-line at **www.plug-in.org**.

ENERGY COST SAVINGS COUNCIL



Take a look at average savings, paybacks and ROI ***from 1,000 documented commercial, industrial and institutional building upgrade projects undertaken between 1988 and 1996. Among the conclusions: whole-building upgrades can reduce energy costs by $1 per square foot or more, with paybacks of 2 to 3 years and returns on investment of 30 to 50 percent. And the paybacks on most products continue for 10 to 20 years — the typical life of the products involved. The report also contains profiles of the projects themselves.***

No junk mail. ***ECSC was formed to help educate end users about achieving a host of financial, aesthetic, and environmental benefits by undertaking energy upgrades. Being placed on the ECSC mailing list will gain you valuable access to ECSC program updates, related news, and information on upgrade seminars and other events in your area.***

Saving up to $1 per square foot each year is easier than many facility executives think. These six steps can smooth the path to energy savings.

Path to

STEP 1
GET AN ESTIMATE OF POTENTIAL SAVINGS

Can energy upgrades save your facilities $.30 to $.50 or even $1 per square foot each year? Probably. It is estimated that less than 20 percent of existing buildings have been upgraded with energy-efficient electrical technologies that could reduce energy costs by 30 to 50 percent.

The first step is to get a ballpark estimate of savings. There are plenty of organizations that can provide a free or low-cost, no-hassle, no-obligation estimate of potential savings based on a preliminary audit of your facilities, including the energy service companies (known as ESCOs) listed on page 14 of this report. Many electric utilities offer free energy audits, as do some skilled electrical distributors. Or, if you have the staff resources, you can handle this step in-house.

STEP 2
GET A CONFIRMING AUDIT TO NAIL DOWN PRECISE ENERGY SAVINGS

To determine exactly how much you can expect to save — is it $1 per square foot? or $.60? or $1.25? — you'll need a detailed confirming audit based on your current building systems, energy-use patterns, utility rate structures and other factors.

The confirming audit is generally not free. But even if you bring in an outside firm, there's no obligation to invest another penny in energy upgrades. It's entirely up to you. And if you decide to proceed, you can generally apply the money spent on the confirming audit to the cost of the actual upgrades. As with the preliminary audit, the confirming audit can be handled in-house or by an outside firm.

STEP 3
SELL ENERGY SAVINGS TO TOP MANAGEMENT

It seems logical that a proposal to save $10,000, $100,000, $1 million or more would be a no-brainer for top management approval. Not so. Top management sometimes seems unwilling to give serious consideration to an energy upgrade.

How can a facility executive break through? It's actually easier than it might seem. There are a range of proven strategies that can be employed to win over skeptical financial officers. And those strategies begin with one simple point: Energy upgrades are a proven investment that delivers substantial long-term savings with relatively little risk. (See page 12.)

Energy Savings

STEP 5
COMPLETE THE UPGRADES

Energy upgrades don't just happen, of course. They take time, careful planning, skilled management and appropriate follow-up. Fortunately, there are a wide range of resources facility executives can draw upon to handle as much of the project as necessary. On many projects, the facility executive is the team's general manager, whose job is to find a coach to develop and manage the game plan of day-to-day tasks to get the project accomplished.

STEP 6
ENJOY THE SAVINGS

Actually, this step doesn't have to be the end — in fact, it may actually be the beginning. Many companies are willing to begin new energy upgrades far more readily after they've seen the savings that can be achieved. Some companies even use savings from completed energy upgrades to start new upgrade projects.

STEP 4
DECIDE HOW TO FINANCE THE UPGRADES

Far too many energy-saving opportunities are missed because financial officers think the only way to pay for them is in cash, upfront. Nothing could be further from the truth.

Today, there are a wide array of financing options, including methods that keep the upgrade off the balance sheet — a big plus in the eyes of some CFOs. These financing choices make it possible to select a funding strategy that meets the needs of any company. (See box on page 12.) In many cases, it's possible to get a guarantee that savings will cover the entire cost of the upgrades until the project is paid off. If monthly savings fall below the guaranteed level, the CFO gets a check for the difference.

Explaining Energy Savings to the CFO

Every CFO is looking for good investment opportunities. The facility executive's job is showing the CFO that investments in energy upgrades are among the most attractive options competing for limited capital funding. Routinely paying themselves back in three to five years — and often in two years or less — these investments in energy-efficient electrical products continue to return financial benefits to investors in the form of reduced energy costs for the life of the electrical products, which averages 10 to 20 years.

"Investments in energy-efficient electrical products generally afford tremendous economic opportunities," says Dr. Steven M. Bloom, principal of the financial consulting firm Capital Markets International. "Assuming that upgrade projects are undertaken by one of the many accredited energy service providers, returns on these projects are substantially higher than other investments of comparable risk."

Bloom adds, "executives should realize that investments in energy conservation represent a long-term means of enhancing shareholder value." They may also qualify for tax incentives.

Just how attractive can these investments be? "A standard approach to assessing the lifelong returns on these investments is by using the internal rate of return method," says Bloom. Internal rate of return (IRR) is the annual percent return on the original investment in a project that is required to generate the projected dollar returns of that project in future years. IRR is usually calculated using financial tables and takes into account the effects of inflation and interest rates.

Consider a lighting upgrade that will cost $100,000 and save a company $40,000 in energy costs for each of the next 5 years in which the lamps will be operable (i.e., this investment will be recouped in 2.5 years). Total nominal savings amount to $200,000 over the life of the lamps (5 years x $40,000/year). The IRR — 29 percent — is significantly higher than the standard 18 to 20 percent corporate IRR for capital investments. (Your company's financial professionals can help calculate IRR; they will need information on the size of the investment and future savings from the project.)

BRING FINANCING OPTIONS TO THE TABLE

Today, energy upgrades can be financed in a wide variety of ways. Four financing options are most common:

- Cash purchase, sometimes called capital improvement expenditure. The building owner pays 100 percent of the initial upgrade cost from company capital funds. The advantage is that all energy savings return directly to the corporate till. The primary disadvantage: large capital outlays are required and may be difficult to get approved — in part because of their impact on the balance sheet.
- Conventional loans permit the institution or corporation to borrow money from a lending agency and pay it back over time. Such loans offer tax and depreciation benefits and the energy upgrades can help pay the loan back with their savings.
- Lease purchases come in two forms. Capital leases are similar to conventional loans. Operating leases, however, treat equipment as rented and do not offer tax or depreciation benefits.
- Shared savings plans are energy-industry-specific financing arrangements that usually require no down payment and involve third-party ownership, performance-based payment and a risk-free positive net cash flow for the company.

There's another easy way to use IRR to fully convey the magnitude of the financial return on an upgrade. In the above example, the investment needed to generate $200,000 in savings by the end of 5 years using a standard corporate IRR of 18 percent is $125,000. In the lighting project described above, however, the investment is only $100,000. The company gets an instant "reward" of $25,000 or 25 percent. This easy "instantaneous rate of return" approach, says Bloom, can help CFOs rank investments, as well as appreciate how financially attractive energy upgrade projects can be, all relative to the company's own internal rate of return.

"When compared to other options," concludes Bloom, "energy upgrades should be viewed by CFOs and other operational executives as investment opportunities to stand up and cheer about."

In many cases, of course, the first reaction to a proposed upgrade is something less than a cheer from financial executives. But changing their minds may not be as hard as it seems. These strategies can help:

SHOW YOU'RE IN GOOD COMPANY. A starting point is to let top executives know that thousands of other companies have already achieved dramatic savings with energy upgrades. (See box on page 7 for a few examples.) More information is available in the Energy Cost Savings Council analysis of 1,000 energy upgrade projects. (See page 8.)

START SMALL. Starting with a relatively inexpensive project, and using that to show that energy efficiency does pay, is a good way to get CFOs comfortable with progressively larger investments in upgrades.

SPEAK THE LANGUAGE. A facility executive who is familiar with some basic concepts of financial management has a much better chance of getting projects approved than one who isn't. (See box on this page.)

KNOW WHAT COUNTS. Organizations often have financial hot buttons the facility executive can take advantage of. At one hospital, energy costs were low on the board's priority list; the issue of the number of employees on the payroll was high. To demonstrate the impact of energy cost reductions, the facility executive translated potential energy savings into the number of employee average salaries it represented. Showing the board that energy upgrades could save jobs got their attention — and made it far easier to win approval for future projects. ■

BEFORE YOU KNOCK ON THE CFO'S DOOR...

The idea of talking to a CFO in accounting terms can be daunting. But many facility executives are better prepared than they realize. To see if you're ready, answer these very personal questions:

1. Do you have a mortgage on your home?

2. Does your family have to live on a budget?

3. Have you ever bought a car? Leased one or considered it?

4. Have you ever invested in stocks or bonds?

If you can answer yes to at least three of these questions, you know how to crunch the numbers as well as most accountants. (Don't have time to do a full financial analysis? Plenty of help is available. See pages 14-15 for some resources.)

The starting point is understanding key terms that will be essential in the presentation to the boardroom.

Discount rate is based on the fact that a dollar will be worth less in a year than it is today. The discount rate is applied to future revenue streams to show how much they're worth in today's dollars; in a sense, it's a sort of interest rate in reverse, used to reduce the value of future dollars.

Cost of capital is the discount rate used by boards of directors in the capital budgeting process.

Net present value is a formula that translates tomorrow's dollars into today's. Technically, it is the current value of the expected net cash flows of an investment, discounted at an appropriate percentage rate, less the initial project cost.

Simple payback (the period of time it will take to return the original investment) is important because it's an indicator of liquidity. That is, it measures how quickly an investment will begin generating cash. It is calculated by dividing initial investment by annual savings and is represented in years.

Simple return on investment (ROI) is calculated by dividing annual savings by initial investment; it is represented as a percent. Simple ROI (inverse of simple payback) shows how much of the initial investment will be returned in a given year.

Internal rate of return (IRR) compares the net present value to the initial cost of the project. Expressed as a percentage, IRR provides CFOs with an easy way to determine an investment's profitability.

Hurdle rate is a company's minimum acceptable IRR for a project.

You're Not Alone...

Energy services companies (ESCOs) can provide facility executives with a wide range of services for energy upgrades, from preliminary audits to financing. One place to turn to find an ESCO that can help you is the Department of Energy's qualified list of ESCOs. The listing provided below is current as of the end of 1998. For additional names of and information about ESCOs, check out the National Association of Energy Service Companies website, www.naesco.org. FacilitiesNet also has an online ESCO directory at www.facilitiesnet.com/energydecisions.

Arizona

J.B. Rodgers Performance Contracting
602-951-3600

Natural Lighting Company, Inc.
602-435-6542

California

Aircon Energy, Inc.
916-922-2004

American Illuminetics, Inc.
760-438-3338

Bechtel National, Inc.
415-768-4918

The Bentley Company
510-945-3500

CH2M HILL
714-429-2000

Comprehensive Energy Management, Inc.
714-722-6457

Davis Energy Group, Inc.
916-753-1100

D-Base Communications, Inc.
909-335-1699

Edison Source/Edison International
562-463-3110

Energy Applications, Inc.
619-294-8448

Energy Pacific, L.L.C.
213-895-5818

Enova Energy, Inc.
213-895-5818

Farinha, Inc.
530-823-6775

Ferreira Service, Inc.
510-783-9330

FMCS Energy Services
209-662-8570

Johnson Controls, Inc., Government Systems Group
619-560-8033

North American Lighting, Inc.
805-257-6290

Onsite Energy
619-931-2400

Pacific Enterprises Energy Services Company
213-895-5818

Parke Industries, Inc.
909-599-1204

PowerLight Corporation
510-540-0550

Proven Alternatives, Inc.
800-728-6749

Science Applications International Corp.
619-646-9114

Southland Industries
562-424-8638

Super Systems, Inc.
714-786-7117

Syska & Hennessy/CEM, Inc.
310-312-0200

USA Planergy, Inc.
818-225-7580

Valley Air Conditioning & Repair, Inc.
209-237-3188

Colorado

Conserve-A-Watt Lighting, Inc.
303-629-0066

Financial Energy Management, Inc.
303-832-1920

Industrial Solar Technology Corp.
303-279-8108

Planetec Utility Services Company, Inc.
303-674-1147

Radian International, L.L.C.
303-675-2661

ServiceMaster Management
303-790-4130

Connecticut

EMCOR Facilities Services, Inc.
253-858-8084

ERI Services
203-335-0266

Savage-Alert, Inc.
860-243-2707

Florida

Bosek, Gibson and Associates, Inc.
813-960-3399

Energy Conservation Specialists, Inc.
800-555-4131

FPL Energy Services, Inc.
561-625-7211

Management & Business Associates, Inc.
305-870-9810

Mor-Lite of North America, Inc.
813-689-1041

United Energy Associates, Inc.
407-740-0178

Vision Impact Corporation (VIC)
904-262-6101

Wilkinson & Jenkins Construction Co., Inc.
813-527-9440

Georgia

Heery International, Inc.
404-881-9880

Limbach Company
770-752-9888

Southern Company Energy Solutions, Inc.
404-506-4998

Hawaii

Hawaiian Electric Company, Inc.
808-543-4770

Illinois

Commercial Engineering Corporation
847-205-1112

Illinova Energy Partners
800-750-6830

Nicor Solutions
630-983-8676

Siebe Environmental Controls
815-637-3140

Siemens Building Technologies, Inc.
847-215-1000

Indiana

Energy Systems Group
812-471-5000

Iowa

Industrial Energy Applications, Inc.
319-378-6510

Kansas

Custom Energy, L.L.C.
913-888-8050

Energy Masters Corporation
913-317-2119

Energy Solutions, Inc.
316-267-8663

Louisiana

Entergy Integrated Solutions, Inc.
504-849-2974

Maine

Combined Energies
207-626-9623

Maryland

Baltimore Gas & Electric Company
410-265-4030

Constellation Energy Projects & Services, Inc.
410-265-4755

Energy Conservation Management, Inc.
410-332-0644

TeleCommunication Systems
410-263-7616

Trigen Development Corporation
410-649-2200

Massachusetts

CONECO Corporation
617-737-6010

Conservation Services Group
617-236-1500

EUA Cogenex Corporation
978-441-0090

Harris Energy Systems
617-723-1700

HEC, Inc.
508-653-0456

Northeast Energy Services Company (NORESCO)
508-875-2252

Sylvania Lighting Services Corp.
978-750-2131

Xenergy, Inc.
781-273-5700

Michigan

Biomass Energy Systems, Inc.
313-913-2092

Minnesota

Energy Masters International, Inc.
800-473-3443

Energy Services Group, L.L.C.
612-595-4328

Honeywell, Inc.
612-951-0182

The Trane Company, Asset Management Services
612-407-3800

Mississippi

FMS Lighting Management Systems, Inc.
601-362-1533

Missouri

Viron Corporation
816-741-3500

Montana

The Montana Power Trading and Marketing Group
406-496-5163

Nevada

Co-Energy Group
702-650-0557

Gardner Engineering, Inc.
702-329-4133

New Hampshire

LighTec, Inc.
603-424-2165

New Jersey

Atlantic Energy, Inc.
609-645-4342

Energis Resources, Inc.
732-744-2110

Imperial Construction & Electric, Inc.
908-810-0322

New York

Building Controls & Services, Inc.
716-693-7220
Con Edison Solutions
914-286-7000
Conserval Systems, Inc.
716-835-4903
Enersave, Inc.
212-661-9494

North Carolina

DukeSolutions, Inc.
704-382-3244
IllumElex Corporation
919-878-9008
Strategic Resource Solutions Corp.
919-859-5759

Ohio

Control Solutions
513-398-9800
Enron Energy Services Operations, Inc.
614-792-6010
FirstEnergy Services Corp.
216-447-3624
Four Seasons Environmental
513-583-8910
Rieck Mechanical Services, Inc.
937-274-1987
Roth Bros., Inc.
216-793-5571
United Resource Group, Inc.
216-899-2222

Oklahoma

Geothermal Design and Engineering, Inc.
405-236-5721

Pennsylvania

Energy Performance Services, Inc.
610-278-6633
Rose Technology Group, Inc.
800-713-0109
Secure Energy
412-330-1010

Tennessee

Systems Engineering & Management Corp.
423-558-9450

Texas

CES/Way International, Inc.
713-666-3541
Control Systems International, Inc.
972-323-5450
Destec Energy, Inc.
713-767-8744
Entech Sales & Services, Inc.
972-241-8188
Global EPS LC
713-467-4678
HL&P Energy Services Company
713-207-3726
Sun Trapper Solar Systems, Mfg.
210-341-2001
hermonetics, Inc.
972-398-1813
TU Integrated Solutions
214-812-4412
United Technologies Carrier, Building Systems and Services
409-582-1524
Utility Engineering Corporation
806-359-2400

Virginia

EMR
703-875-2800
Evantage, a Division of Virginia Power
804-273-4251
General Electric Company, Motors and Industrial Systems
804-827-4539
ICRC Energy, Inc.
703-352-4910
Lord & Company, Inc.
703-631-6843
M.C. Dean, Inc.
703-802-6231
Superior Management Services, Inc.
703-418-3500
Virginia Energy Services
804-358-2000
Washington Gas Energy Systems, Inc.
703-750-5133

Washington

Abacus Engineered Systems, Inc.
206-283-0200
ESSCO Electric, Inc.
509-547-5504
Morrison Construction Services, Inc.
509-375-1990
Northwest Energy Services, Inc.
509-838-8978
UCONS, L.L.C.
206-889-6485

Washington, D.C.

APRO Enterprises, Inc.
202-547-3499
Pepco Services, Inc.
202-739-0804
SYCOM Enterprises
202-625-4118

West Virginia

Industrial Electric Corporation
304-252-2202

Wisconsin

Wisconsin Energy Company
414-221-3927

ENERGY-EFFICIENCY FINANCING

Here are some of the major companies offering energy-efficiency financing. Many ESCOs also offer financing for energy-efficient electrical product upgrades.

ABN AMRO Chicago Corporation
312-855-6612
Academic Capital, L.L.C.
626-584-0184
Ally Commercial Credit
415-464-5700
Dana Commercial Credit, Energy Services Group
419-897-7567
EnerSource Capital
800-595-5115
Energy Capital Partners
617-574-1130
GE Capital
203-731-6075
Government Capital Corporation
972-518-1199
Graybar Financial Services
314-512-9200
Koch Financial Corporation
800-532-6864
Paribas
212-841-2000
Sanwa Business Credit Corporation
312-782-8080

More information about energy-efficiency financing companies is available on the Internet. EPA's ENERGY STAR Buildings program offers an "Allies Services and Products Directory" at **www.epa.gov/asap**; it can be searched for finance companies. So can the National Association of Energy Services Company database (**www.naesco.org**). The Green Energy Finance site (**http://energyfinance.org**) provides a wide range of energy-efficiency financing resources and information. And an energy project financing directory can be found at **www.informationforecast.com**. Links to all these websites can be found on FacilitiesNet at **www.facilitiesnet.com/links**.

OTHER UPGRADE RESOURCES

ENERGY STAR Buildings/Green Lights

This voluntary EPA program provides resources — including publications, workshops, manuals, public recognition, software, and customer service to companies that join — to support energy-efficient upgrades. Call 800-STAR-YES. Web site: **www.epa.gov/appdstar/buildings**

Rebuild America

This DOE program works with community partnerships to improve the energy efficiency of buildings. Its goal is to develop and execute large-scale programs devoted to supporting/funding energy-efficient renovations. Among the program's resources is a range of information about financing. Call 800-DOE-EREC. Web site: **www.eren.doe.gov/buildings/rebuild**

Department of Energy, Office of Industrial Technologies

DOE sponsors technical programs that can help manufacturers of all sizes become more productive through efficient use of motor systems, steam systems, compressed air, and combined heat and power systems. Small and medium-sized manufacturers can also receive no-cost energy, waste and productivity assessments. Call 202-586-2090. Web site: **www.oit.doe.gov**

☐ **Yes, I want to tap into potential energy cost savings of up to $1 per square foot in my facility. Please call me to help me get started.**

☐ **I'm interested in energy savings but upgrades are not currently a priority in our organization because:**

- ☐ We have already upgraded our facilities or are in the process of doing so.
- ☐ Budget restrictions limit our ability to undertake upgrades.
- ☐ Analyzing our energy costs is not currently a priority.
- ☐ Our company does not have staff to manage such a project.

Please tell us about yourself:

Name

Title

Company

Address, City, State, Zip

Phone Number | Fax Number | E-Mail Address

My company's primary business is: _____

What is the total square footage of the building(s) you are responsible for? _____

☐ Send me the **FREE report on 1,000 energy upgrade projects** — showing why returns of $1 per square foot per year and 2-3 year paybacks are possible.

☐ Put me on the mailing list for future Energy Cost Savings Council program updates and upgrade information.

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